

WETLAND CREATION

(Acre)
Code 658

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

A wetland created on a site which historically was not a wetland or is a wetland but the site will be converted to a wetland with a different hydrology, vegetation type, or function than occurred naturally on the site.

II. Purpose

Create wetlands that have wetland hydrology, hydrophytic plant communities, hydric soil conditions, and wetland functions and values.

III. Conditions Where Practice Applies

This practice applies to sites where no natural wetland occurred or where a wetland exists or existed and the wetland characteristics (hydrology, vegetation types, and functions) will be different from what historically existed.

Upon completion of the practice the site will meet the current NRCS definition of wetland if hydric soil criteria are met at the site.

This practice is applicable only if hydrologic conditions can be approximated by modifying drainage and/or artificial flooding of a duration and frequency to create and maintain wetland conditions during an average annual precipitation event. The wetland class/subclass to be created, as identified in the Classification of Wetlands and Deepwater Habitats of the United States, or Wetland Plants and Plant Communities of Minnesota and Wisconsin, will be specified in the design documentation.

This practice does not apply to: Constructed Wetland (656) intended to treat point and non-point sources of water pollution; Wetland Enhancement (659) intended to rehabilitate a degraded wetland where specific functions and/or values are enhanced beyond original conditions; or Wetland Restoration (657) intended to rehabilitate a drained or degraded wetland where the soils, hydrology, vegetative community, and biological habitat are returned to original conditions.

IV. Federal, State, and Local Laws

Users of this standard shall comply with applicable federal, state and local laws, rules, regulations or permit requirements governing wetland creations. This standard does not contain the text of federal, state, or local laws.

V. Criteria

A. General Criteria Applicable to all Purposes

The landowner shall obtain all necessary local, state and federal permits prior to installation of this practice.

Created wetlands will only be located where the soils, hydrology and vegetation can be modified to meet the current NRCS criteria for a wetland.

Document the soil, hydrology and vegetative characteristics of the site before alteration.

Complete the Wetland Planning Checklist, Appendix A, Chapter 13, NRCS Engineering Field Handbook prior to designing the wetland creation.

The effect of any modification to the existing surface and/or subsurface drainage system on upstream and downstream landowners shall be evaluated. Upstream surface and subsurface drainage shall not be impacted unless appropriate permissions are obtained or mitigation measures are implemented. An evaluation of all applicable state and local laws and regulations pertaining to flooding, surface and subsurface drainage will be included in the design documentation.

Establish vegetative buffers on surrounding uplands to reduce the delivery of sediment and soluble sediment attached substances to the created wetland.

Excessive nutrient, pesticide, or other pollutant inflows shall be controlled prior to site restoration. Examples of excessive inflows include direct runoff

from a feedlot or other obvious pollution source, an actively eroding gully emptying into the site, or a poorly treated watershed that is contributing sediment and its associated pollutants.

B. Criteria for Hydric Soil Condition

Establish an approximation of the soil conditions needed to typically support the wetland type being established.

C. Criteria for Wetland Hydrology

The hydrology of the site is defined as the rate and timing of inflow and outflow, source, duration, frequency, and depth of flooding, ponding or saturation.

Wetland hydrology will be created which will support the wetland type being established. As a minimum, the hydrologic soil conditions must be able to support hydrophytic vegetation.

If embankments, water control structures, surface or subsurface drainage manipulation, or grade stabilization structures are required, the standards and specifications for Wetland Restoration (657) or Structure For Water Control (587) will be followed as appropriate.

D. Criteria for Hydrophytic Vegetation

Native vegetation will be established for the wetland type(s) being created. Soils and site condition will dictate what vegetation is appropriate. Site preparation requirements, planting rates, and species will be based on Wisconsin Agronomy Technical Note 5.

Preference is given to top-dressing at least 50% of the site with soil containing a seed bank of desired native species to a minimum depth of 4 inches. If natural colonization of native species will realistically dominate within 5 years, then natural regeneration can be left to occur without top-dressing.

E. Criteria for Wetland Functions

Created wetland goals and objectives should include targeted wetland functions for the wetland type and site location.

A functional assessment shall be performed on the site prior to creation using the Hydrogeomorphic (HGM) approach, as

identified in the National Food Security Act Manual, Part 527, Appendix, or similar method.

VI. Considerations

Consider applying this practice adjacent to existing wetlands to increase wetland system complexity and diversity, decrease habitat fragmentation, and ensure colonization of the site by wetland flora and fauna.

Consider linking wetlands by corridors to enhance the wetland's use and colonization by wetland flora and fauna.

Consider adverse effects on downstream flows or aquifers that would impact other water uses or users.

Consider nutrients, pesticides, and other pollutants contained in surface and ground water, as well as accumulated sediments, that may have an adverse effect on wetland vegetation. The nutrient and pesticide tolerance of the species planned along with the wetland objectives should be considered where known nutrient and pesticide contamination exists.

Consider increasing the size of buffer practices around the perimeter of the site. Plan practices such as Filter Strip (393), Field Border (386) and/or Conservation Cover (327) to enhance the wildlife habitat value of the vegetative buffer between the management unit and adjacent land uses. This buffer should be at least 30 feet wide, or wider to enhance the wildlife habitat value.

Consider use of these areas by reptiles and amphibians. Stacked logs and/or rock piles may be located near the water's edge to provide critical habitat for local reptile and amphibian species.

VII. Plans and Specifications

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, job sheets, technical notes, narrative documentation in the conservation plan, or other acceptable documentation.

Plans and specifications for installing structures for water control shall be in keeping with this standard and shall prescribe the requirements for applying the practice to achieve its intended purpose. The plan shall specify the location, grades, dimensions, materials, hydraulic and structural requirements for the individual structure, and the timing or sequence of

installation activities. Provisions must be made for necessary maintenance.

NRCS field office staff are encouraged to work closely with the NRCS Biologist, FWS Biologist, WDNR Wildlife Manager, or other wetland specialist when developing site specific plans and specifications.

VIII. Operation and Maintenance

The purpose of operation and maintenance is to insure that the practice functions as intended over time.

A plan for the operation, maintenance, and management of the area shall be developed and recorded using approved job sheets, technical notes, or other forms of acceptable documentation.

The plan shall include monitoring and management of the overall site, as well as structural and vegetative measures. The area should be reviewed annually to see if adjustments are needed in any water/vegetation management plan.

Repair and upkeep of the practice (maintenance) shall be carried out as needed, such as repair or replacement of vegetative or structural components.

The following activities will be addressed in the Operation and Maintenance Plan:

1. Timing and level setting of water control structures required for establishment of desired hydrologic conditions or for management of vegetation.
2. Inspection schedule of embankments and structures for damage assessment.
3. Depth of sediment accumulation allowed before removal is required.
4. Management needed to maintain vegetation, including control of unwanted vegetation.
5. Acceptable uses and timing (e.g. grazing and haying).

Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) shall be implemented where available and feasible.

IX. References

Cowardin, L.M., V. Carter, F. C. Golet, E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service. FWS/OBS-79-31.

Eggers, Steve and Don Reed. 1997. Wetland Plants and Plant Communities of Minnesota and Wisconsin. U.S. Army Corps of Engineers, St. Paul District, St. Paul, Minnesota. 264 pp.

USDA, NRCS, National Engineering Handbook Part 650, Engineering Field Handbook, Chapter 13 Wetland Restoration.

USDA NRCS, Wisconsin Field Office Technical Guide, Section IV, Conservation Practice Standards and Specifications.

USDA, NRCS National Food and Security Act Manual, Part 527, Appendix, Functional assessment Using the Hydrogeomorphic Approach for the Functional Assessment Of Wetlands.